

**General Notes:**

This report contains results for Metals and Glycols analyses only. All other parameters identified on the chain-of-custody form are included in separate reports. Lab Sample numbers 1201013-25 thru -26 and 1201013-45 thru -48 are not included in this report since these samples were designated for Volatile Organic analysis only.

For Work Order 1201013 - **This is Report 1 of 3.**

All samples were received intact and at proper temperature.

Lab Sample number 1201013-20 was cancelled. This sample was designated for Oil & Grease analysis and shipped independently from the other analytical fractions. The sample was reassigned to Lab Sample number 1201013-33.

For samples received by the laboratory on 1/28/2012, the analyses Alcohol and Glycol for FB03 (1201013-12) were not recorded on the chain-of-custody form. A request for a Letter-to-File was submitted to the sampler on 2/9/2012.

Some samples designated for the analysis of Orthophosphorous were received at the laboratory past the established holding times. Therefore, all samples were analyzed using the Total Phosphate method and results for the analysis by the Orthophosphorous method are not included in this report. Since the Orthophosphorous method was being used as a screening method to determine the need to analyze the sample by the Total Phosphate method, results for Total Phosphate are not impacted.

Samples designated for the analysis of Oil & Grease were received in sample containers inconsistent with the type needed for the routine extraction procedure. Therefore, all samples were extracted using the manual extraction technique.

Where applicable, sample results are qualified based on the highest level concentrations of field QC contamination found in the field, equipment, or trip blanks.

**Metals Analysis Note:**

Uranium, strontium, lithium, tin, and titanium were analyzed as an on-demand analysis.

**Glycols by HPLC/MS/MS Note:**

Samples were analyzed for diethylene glycol (DiG) (CAS# 111-46-6), triethylene glycol (TriG) (112-27-6), tetraethylene glycol (TeG) (112-60-7), 2-butoxyethanol (2-Bu) (111-76-2) and 2-methoxyethanol (109-86-4) by HPLC/MS/MS (inst id: TQD-LCMSMS) on a Waters Atlantis dC18 3um 2.1 x 150mm column (s/n- 0141301481).

An HPLC/MS/MS method does not currently exist for these analytes. ASTM D 7731-11 and EPA SW-846 Methods 8000C and 8321 were followed for method development and QA/QC limits, where applicable. All applicable OASQA On Demand QA/QC protocols were followed.

The aqueous samples were injected without extraction onto the HPLC/MS/MS system

Refer to notes in the case file for additional information regarding the analysis.

**REPORT 1 of 3**

**General Notes:**

This report contains results for Volatiles (VOAs), Semivolatiles (SVOAs), and Alcohol analyses only. All other parameters identified on the chain-of-custody form are included in separate reports. Lab Sample numbers 1201013-02, -04, -06, -08, -10, -18, -19, -21 thru -24, -27, 37 thru -44 are not included in this report since these samples were designated for Metals and Mercury analyses only.

For Work Order 1201013 - **This is Report 2 of 3.**

All samples were received intact and at proper temperature.

Lab Sample number 1201013-20 was cancelled. This sample was designated for Oil & Grease analysis and shipped independently from the other analytical fractions. The sample was reassigned to Lab Sample number 1201013-33.

For samples received by the laboratory on 1/28/2012, the analyses Alcohol and Glycol for FB03 (1201013-12) were not recorded on the chain-of-custody form. A request for a Letter-to-File was submitted to the sampler on 2/9/2012.

Some samples designated for the analysis of Orthophosphorous were received at the laboratory past the established holding times. Therefore, all samples were analyzed using the Total Phosphate method and results for the analysis by the Orthophosphorous method are not included in this report. Since the Orthophosphorous method was being used as a screening method to determine the need to analyze the sample by the Total Phosphate method, results for Total Phosphate are not impacted.

Samples designated for the analysis of Oil & Grease were received in sample containers inconsistent with the type needed for the routine extraction procedure. Therefore, all samples were extracted using the manual extraction technique.

Where applicable, sample results are qualified based on the highest level concentrations of field QC contamination found in the field, equipment, or trip blanks.

**SVOAs Analysis Note:**

All samples were extracted by EPA SW-846 Method 3520C followed by analysis using EPA SW-846 Method 8270D. Refer to notes in case file for additional information regarding the analysis.

A separate calibration curve is used for two compounds, 2-methoxyethanol and 1-methylnaphthalene, with quality control requirements per the on-demand protocol.

Quantitation limit for 2,4-Dinitrophenol is qualified estimated "UJ" in sample 1201013-01 due to zero percent recovery in the low-spike quality control check. Quantitation limits for 2,4-Dinitrophenol, pentachlorophenol, and 4,6-dinitro-2-methylphenol are qualified estimated "UJ" in samples 1201013-03, -05, -07, 09, -12 thru -17, -28-36 due to low recovery in the low-spike quality control checks.

**VOA Analysis Note:**

Acrylonitrile was analyzed on-demand using CLP equivalent methodology. This analyte does not appear in the data tables or the QC summary and all data for this compound is summarized here. Acrylonitrile was not detected in any of the samples above a quantitation limit of 2 ug/L. A four point curve was analyzed (2, 5, 10 and 20 ug/L). The samples were preserved to a pH<2 with HCl. A low level second source blank spike analyzed at a concentration of 2 ug/L had a recovery of 112%. A mid level second source blank spike analyzed at a concentration of 5 ug/L had a recovery of 102%. A duplicate second source blank spike at 5 ug/L had 205% recovery. Due to this high recovery, duplicate blank spikes from the primary source were analyzed. Recoveries for these spikes were 110% and 157%.

2-Chloroethylvinyl ether is not included in the analysis. 2-chloroethylvinyl ether breaks down in acidified samples.

Matrix spike/matrix spike duplicate analysis could not be completed due to insufficient sample volume. A single matrix spike was performed for samples 1201013-14 and 1201013-33.

The acetone result for sample 1201013-36 is qualified with a "K" due to an interference from isopropanol.

**Alcohols Analysis Note:**

None.

**REPORT 2 of 3**

**General Notes:**

This report contains results for Inorganic analyses only. All other parameters identified on the chain-of-custody form are included in separate reports. Lab Sample numbers 1201013-25 thru -26 and 1201013-45 thru -48 are not included in this report since these samples were designated for Volatile Organic analysis only.

For Work Order 1201013 - **This is Report 3 of 3**. All samples were received intact and at proper temperature. Copies of Chain-of-Custody forms are included in Report 1 of 3.

Lab Sample number 1201013-20 was cancelled. This sample was designated for Oil & Grease analysis and shipped independently from the other analytical fractions. The sample was reassigned to Lab Sample number 1201013-33.

For samples received by the laboratory on 1/28/2012, the analyses Alcohol and Glycol for FB03 (1201013-12) were not recorded on the chain-of-custody form. A request for a Letter-to-File was submitted to the sampler on 2/9/2012.

Some samples designated for the analysis of Orthophosphorous were received at the laboratory past the established holding times. Therefore, all samples were analyzed using the Total Phosphate method and results for the analysis by the Orthophosphorous method are not included in this report. Since the Orthophosphorous method was being used as a screening method to determine the need to analyze the sample by the Total Phosphate method, results for Total Phosphate are not impacted.

Samples designated for the analysis of Oil & Grease were received in sample containers inconsistent with the type needed for the routine extraction procedure. Therefore, all samples were extracted using the manual extraction technique.

Where applicable, sample results are qualified based on the highest level concentrations of field QC contamination found in the field, equipment, or trip blanks.

**TDS/TSS Analyses Note:**

TDS results for samples 1201013-13 thru -17, -28, -31 thru -34 are qualified estimated "J" and quantitation limits for samples 1201013-12, -29, -30, -35, -36 are qualified as estimated "UJ" due to problems with negative values for the blank and some of the samples. In addition, there was a high relative percent difference (RPD) obtained for one of the duplicate analyses. QC criteria were met for TSS analysis.

**Anions Analysis Note:**

The nominal quantitation limit (NQL) was outside acceptance criteria, therefore, the Quantitation Limit is reported at 0.15 mg/L instead of 0.05 mg/L for all samples.

**Nitrite/Nitrate and Total Nitrogen Analysis Note:**

Samples were run as an on-demand analysis.

**Oil and Grease Analysis Note:**

Samples were run as an on-demand analysis.

Samples were received in containers not conducive to use on the Horizon SPE-DEX automated system. Therefore, manual extraction technique was used for all samples. Refer to notes in the case file for additional information.

**Total Phosphorus Analyses Note:**

Samples were run as an on-demand analysis.

**REPORT 3 of 3**